



EPA releases Bristol Bay Assessment describing potential impacts to salmon and wetlands from copper, gold mining

Agency launched study after requests for action to protect Bristol Bay from large-scale mining

CONTACT: Hanady Kader, EPA Public Affairs, 206-553-0454, kader.hanady@epa.gov

(Seattle—Jan. XX, 2014) The U.S. Environmental Protection Agency today released its final Bristol Bay Assessment describing potential impacts to salmon and ecological resources from proposed large-scale copper and gold mining in Bristol Bay, Alaska. The report, titled “An Assessment of Potential Mining Impacts on Salmon Ecosystems of Bristol Bay, Alaska,” concludes that large-scale mining in the Bristol Bay watershed poses risks to salmon, wildlife and Native Alaska cultures. Bristol Bay supports the largest sockeye salmon fishery in the world, producing nearly 50 percent of the world’s wild sockeye with runs averaging 37.5 million fish each year.

“Over three years, EPA compiled the best, most current science on Bristol Bay to understand how large-scale mining could impact salmon and wetlands in this unique area of extraordinary natural resources,” said Dennis McLerran, Regional Administrator for EPA Region 10. “Perhaps more so than anywhere else in the world, salmon are the economic and cultural cornerstone of this ecosystem. Our report concludes that large-scale mining poses real risks to salmon and tribal communities that have depended on them for thousands of years.”

To assess potential mining impacts to salmon resources, EPA developed three mine scenarios based on modern mining practices. Numerous risks associated with large-scale mining are detailed in the assessment:

- Depending on the size of the mine footprint, EPA estimates 24 to 94 miles of streams and 2 to 7.6 square miles of wetlands would be destroyed.
- EPA estimates 9.3-33 additional miles of salmon-supporting streams would be impacted by streamflow alterations caused by water use at the mine.
- Extensive quantities of toxic waste and wastewater would have to be successfully collected, stored and treated. The waste would have to be managed during mining and long after mining concludes.
- Consistent with the recent record of similar mines operating in the United States, polluted water from the mine site could enter streams through uncollected runoff, in spite of best management practices.
- A variety of water collection and treatment failures are possible, ranging from operational failures resulting in short-term releases of untreated leachates to long-term failures to operate water treatment systems.
- A transportation corridor to Cook Inlet crossing many streams and wetlands would put sockeye salmon spawning areas in and near Iliamna Lake at risk.
- Consistent with the recent record of similar mines currently operating in North and South America, pipeline failures along the transportation corridor could release toxic copper concentrate or diesel fuel into salmon-supporting streams or wetlands.
- Catastrophic effects on fishery resources from full or partial failure of a dam at a tailings storage facility.

The Bristol Bay ecosystem generated \$480 million in economic activity in 2009 and provided employment for over 14,000 full- and part-time workers. The region supports all five species of Pacific salmon found in North

America: sockeye, coho, chinook, chum and pink. In addition, it is home to other fish species, 190 bird species, and more than 40 terrestrial animal species, including bears, moose and caribou.

In 2010, several Bristol Bay Alaska Native tribes requested that EPA take action under the Clean Water Act to protect Bristol Bay and salmon resources from development of the proposed Pebble Mine, a copper, gold and molybdenum mining venture backed by Northern Dynasty Minerals Ltd. Other tribes asked EPA to wait for a mine permitting process to begin before weighing in on the environmental issues Pebble Mine presents.

Before responding to these requests, EPA identified a need for a scientific assessment to better inform the agency and others. EPA scientists with expertise in Alaska fisheries, mining, geochemistry, anthropology, risk assessment and other disciplines reviewed information compiled by the State of Alaska, federal resource agencies, tribes, the mining industry, and scientific institutions from around the world. EPA focused on the Kvichak and Nushagak River watersheds, which support half of the Bristol Bay sockeye salmon runs.

"The assessment is a technical resource for governments, tribes and the public as we consider how to address the challenges of large-scale mining and ecological protection in the Bristol Bay watershed," McLerran said.

EPA maintained an open public process, reviewing and considering all comments and scientific data submitted during two separate public comment periods. The agency received 233,000 comments on the first draft of the assessment and 895,000 comments on the second draft. EPA held eight public meetings attended by approximately 2,000 people. EPA consulted and coordinated with federally recognized tribal governments and Alaska Native Claims Settlement Act villages and regional corporations.

The study has been through an independent peer review process. Twelve independent scientists with expertise in mine engineering, salmon fisheries biology, aquatic ecology, aquatic toxicology, hydrology, wildlife ecology, and Alaska Native cultures reviewed the assessment for its scientific quality. The same peer reviewers evaluated the revised draft to determine how well EPA addressed their comments.

The agency reviewed information about the copper deposit at the Pebble site and used data and information submitted by Northern Dynasty Minerals Ltd. to the U.S. Securities and Exchange Commission, including the document titled "Preliminary Assessment of the Pebble Project, Southwest, Alaska," which provides detailed descriptions of three mine development cases comprising 25, 45 and 78 years of open pit mining.

Over the course of the assessment EPA met with tribes, Alaska Native corporations, mining company representatives, state and local governments, tribal councils, fishing industry representatives, jewelry companies, seafood processors, restaurant owners, chefs, conservation organizations, members of the faith community, and members of Congress.

EPA produced the report with its authority to perform scientific assessments under the Clean Water Act. As a scientific report, this study does not recommend policy or regulatory decisions.

For more information on the EPA Bristol Bay Report, visit: <http://www2.epa.gov/bristolbay>

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